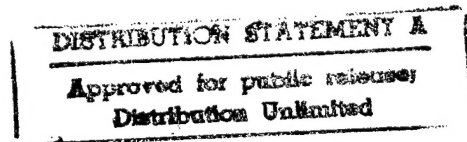


U.S. DEPARTMENT OF THE NAVY

ENVIRONMENTAL ASSESSMENT  
FOR  
FAMILY HOUSING/MULTI-PURPOSE CENTER  
H-374

NAVAL SECURITY GROUP ACTIVITY  
SUGAR GROVE  
WEST VIRGINIA



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DEPARTMENT OF DEFENSE  
DEPARTMENT OF THE NAVY

FINDING OF NO SIGNIFICANT IMPACT FOR THE CONSTRUCTION OF FAMILY  
HOUSING AND A MULTI-PURPOSE CENTER AT NAVAL SECURITY GROUP  
ACTIVITY, SUGAR GROVE, WEST VIRGINIA

Pursuant to section 102(2)(c) of the National Environmental Policy Act (NEPA) of 1969 and the Council on Environmental Quality regulations (40 CFR Parts 1500-1508) implementing the procedural provisions of NEPA, the Department of the Navy gives notice that an Environmental Assessment (EA) has been prepared and that an Environmental Impact Statement is not required for the construction of family housing and a multi-purpose center at Naval Security Group Activity (NSGA), Sugar Grove, West Virginia.

The proposed action is to construct 23 units of military family housing and a multi-purpose center at the Support Area of the NSGA, Sugar Grove, West Virginia. The military family housing will consist of 21, 2-story Junior Enlisted duplex units; 1, 1-story handicapped adaptable unit; and a 1, 1-story ranch style house for the Installation Command Quarters (ICQ). The multi-purpose center will contain the family housing office, furnishings warehouse, self-help center, and housing community center. The following construction projects will be required: construction of 21, 2-bedroom, 2-story duplex units and 1, 1-story handicapped adaptable unit with open carport, patio, privacy fence, and exterior storage; a 1-story ranch style house with attached garage; and a 7,755 square foot, multi-purpose building containing the family housing office, community center, furnishings warehouse, and self-help center. The proposed construction will be compatible with the NSGA Sugar Grove Master Plan and will improve the quality of life and morale for Military members and their families by providing adequate, affordable, and safe housing and a multi-purpose center to provide family support and services in one centrally located facility.

The following alternatives were considered for the proposed projects: the "no action" alternative; construction at other sites at NSGA Sugar Grove; and construction at the proposed sites. The "no action" alternative would deny the construction of the 23 housing units and the multi-purpose center and would leave NSGA Sugar Grove operating with unsuitable housing and dispersed service facilities that would not support efforts to improve the quality of life for military personnel. For this reason, the no action alternative was rejected. Three alternative housing sites and one alternative multi-purpose building site at NSGA Sugar Grove were evaluated: a site located at the existing family housing complex; a site located on the east side of NSGA Sugar Grove, along the eastern side of Armentrout Drive; a site located on the east side of NSGA Sugar Grove, along the eastern and western sides of Armentrout Drive; and a site across from the Youth Center, within the existing family housing complex. All were rejected due to one or more of the following: extensive environmental and safety impacts; incompatibility with future land uses; excessive cost. Construction at the proposed sites will meet the Department of Defense's criteria for adequate, affordable, and safe housing for Military families and will provide a centrally located facility to provide family support and services.

Enclosure (1)

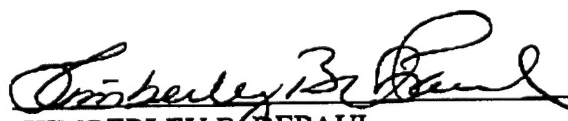
Although approximately 9 acres of wooded hillside will be removed for the family housing/ ICQ house, and approximately 3 acres of developed land will be used for the construction of the multi-purpose center, there will be no significant impacts upon any federally listed threatened or endangered species, critical habitat, wetlands, or archeological or historic resources. A jurisdictional wetland exists approximately 200-300 feet from the proposed family housing and ICQ sites. This wetland will be protected from soil/sediment contamination during construction by utilizing best management practices (e.g. hay bales and silt fencing) and by creating a new system of vegetated swales to transport stormwater runoff into the South Fork River. Should any archaeological or historical sites be encountered during construction activities, such activities will cease and the West Virginia Division of Culture and History will be contacted. There will be no significant impacts to surface, ground, or potable waters. Best management practices to minimize soil erosion and sedimentation deposit will be implemented during construction and a system of new vegetated swales will be created to transport stormwater runoff into the South Fork River. The family housing units and the multi-purpose center will obtain their potable water from the existing water system on NSGA Sugar Grove. The ICQ will obtain potable water by tapping into the water main at the proposed family housing site. This will require digging a 2-foot wide trench and laying an 8-inch waterline through the wooded area between the proposed family housing units and the ICQ site.

The proposed action will occur in a designated attainment area that currently meets National Ambient Air Quality Standards for all criteria pollutants. Air emissions associated with this project will be short-term in duration, occurring only during the construction time frame. Soils will be watered during construction to contain dust. There will be no significant impacts to hazardous waste, transportation, utilities, schools, and safety. The Pendleton County West Virginia school system will accommodate the minor increase of approximately 8 school age children transferring from the Virginia school system. The utility infrastructure on the site will accommodate the requirements associated with these projects. There will be no disproportionately high and adverse human health or environmental effects on minority and low-income populations.

Based on information gathered during preparation of the EA, the Navy finds that the proposed construction of family housing and a multi-purpose center at NSGA, Sugar Grove, West Virginia, will not significantly impact human health or the environment.

The EA prepared for the Navy addressing this action may be obtained from: Commanding Officer, Naval Security Group Activity, Sugar Grove, West Virginia 26815, (Attn: Mr. Steven Niethamer, Public Works Department, Code 70E), telephone (304) 249-6341. A limited number of copies of the EA are available to fill single copy requests.

13 Sep 84  
Dated

  
KIMBERLEY B. DEPAUL  
Acting Special Assistant for Environmental Planning  
Environmental Protection, Safety and Occupational Health Division  
Deputy Chief of Naval Operations (Logistics)

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## **Executive Summary**

This Environmental Assessment (EA) discusses the environmental issues associated with construction of 23 units of Military family housing and a multi-purpose center.

The development sites for the proposed action are at the Support Area of the Naval Security Group Activity Sugar Grove. The family housing units and multi-purpose center will create a better quality of life for Military members and their families.

This EA has been prepared in accordance with the National Environmental Policy Act (NEPA), the Council on Environmental Quality regulations implementing NEPA (40 Code of Federal Regulations CFR 1500-1508), and the Naval Operations Instruction (OPNAVINST) 5090.1B Chapter 2.

## **Description of the Proposed Action**

The proposed action would construct 23 units of Military family housing and a multi-purpose center. The multi-purpose center would house the family housing office, furnishings warehouse, self-help center, and housing community center. The family housing would consist of twenty-one 2-bedroom, 2-story Junior Enlisted (E1-E6) duplex units, one 1-story ranch style home with attached garage, and one 1-story handicapped adaptable unit.

## **Environmental Impacts of the Proposed Action**

Short-term impacts to wildlife would occur as the wooded area is being cleared for construction and converted into developed land. These impacts would be minor, as the wildlife would migrate further into the same wooded area or onto adjacent woodlands. Impacts to air quality would be short-term, occurring only during construction operations. Minor impacts to soil would occur during the planting of grass and ornamental vegetation after construction is completed.

Long-term environmental impacts to topography and vegetation would occur as a result of converting 9.02 acres of wooded hillside into developed land.

No threatened and endangered species, wetlands, or cultural resources would be impacted.



## Alternatives

The alternatives addressed in this EA include construction of the project at Naval Security Group Activity Sugar Grove (several site locations at the facility are discussed), public/private venture, and no action (do not construct).

Alternatives were evaluated based on the concepts presented in the Navy Neighborhoods of Excellence Visual Guide and environmental criteria. The preferred alternative is construction of the projects at Naval Security Group Activity, Sugar Grove because it meets all criteria.

I. **Introduction.** The Naval Security Group Activity (NSGA) Sugar Grove proposes to construct 23 units of family housing. The environmental impacts associated with this action have been assessed in accordance with the National Environmental Policy Act (NEPA) of 1969 as amended and OPNAVINST 5090.1B, Chapter 2.

The Naval presence at Sugar Grove, West Virginia began as the Naval Research Laboratory Facility. The natural mountain shield and low level of man-made noise made the location ideal for communications research. From 1955 until 1992, the Complex operated as a communications station. In 1992 the communications station was disestablished and the Naval Security Group Activity Sugar Grove was established. This United States Armed Forces installation engages in communications research and development for the Department of the Navy and occasional research in communications phenomena in support of various elements of the United States Government. The Installation's mission and natural isolated location are linked together.

A. Proposed Action. Twenty-three units of family housing would be constructed at NSGA Sugar Grove (hereinafter Sugar Grove, the Activity, or the Base). The family housing would be duplex units constructed of wood frame or masonry with stucco and/or brick, open carport, patio, privacy fence, and exterior storage. The

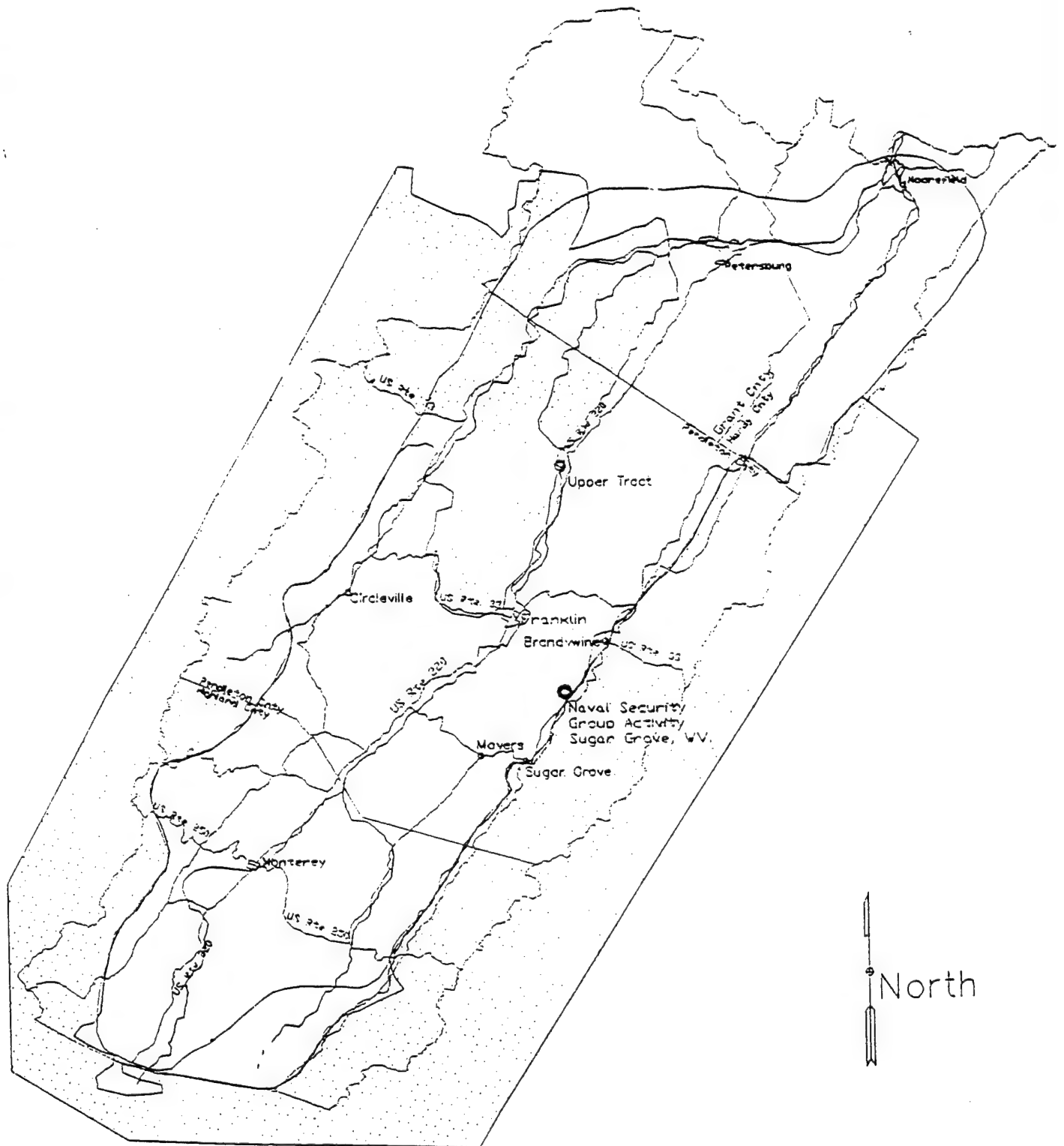
Installation Command Quarters unit (ICQ) would be a one-story ranch style home with attached garage. Twenty-two 2-bedroom Junior Enlisted (E1-E6) duplex units would be constructed, with 21 units being 2-story units and one unit being a 1-story handicapped adaptable duplex unit.

Associated with the project is a multi-purpose building that would house the family housing office, housing community center, furnishings warehouse, and self-help center.

B. Project Siting. NSGA Sugar Grove is located in Sugar Grove, West Virginia. Sugar Grove is a small community in the County of Pendleton that is located between the Allegheny Mountains on the northwest and the Appalachian Mountains on the southeast (Figure 1). The community of Sugar Grove is unincorporated, sparsely populated (approximately six residences), secluded, and has one country store/post office combined. The community of Sugar Grove can only be reached by driving winding mountainous roads. The closest city to Sugar Grove is Harrisonburg, Virginia which is located over the Shenandoah Mountain via U.S. Route 33 (Figure 2). The outer limits of Harrisonburg can be reached in approximately one hour's drive from Sugar Grove if road conditions are good.

NSGA Sugar Grove consists of two sites approximately three miles apart. They are the Operations Area and the Support Area. The proposed project would be

Figure 1



Naval Security Group Activity  
Sugar Grove, WV

Figure 2



SUGAR GROVE, WEST VIRGINIA  
AND  
HARRISONBURG, VIRGINIA

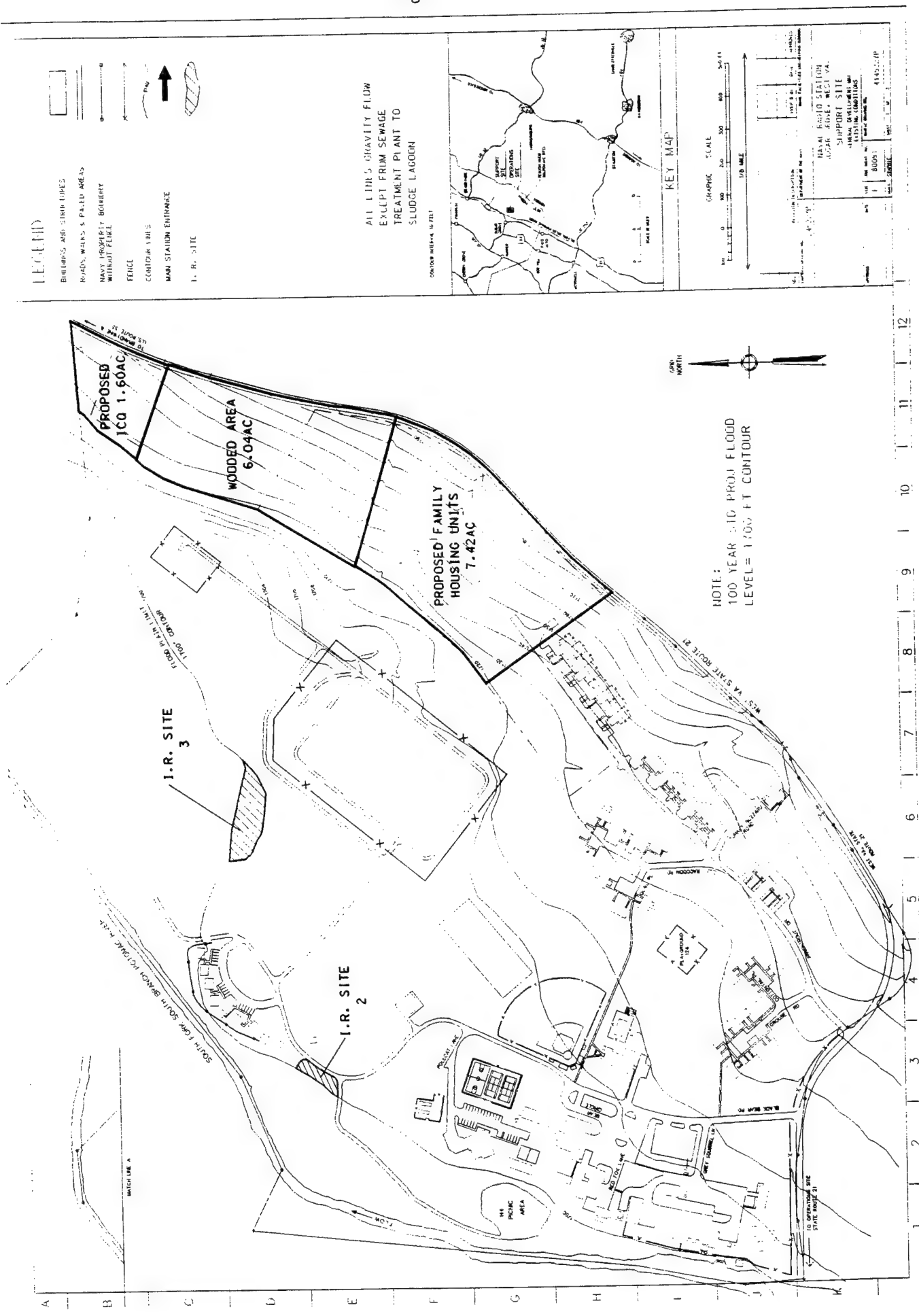
located at the Support Area. The Support Area is bounded on the west by the South Fork of the South Branch of the Potomac River (hereinafter referred to as the South Fork River) and Highway 21 on the eastern and southern perimeters.

The proposed site for the family housing units would impact approximately 7.42 acres of a 15.06 acre wooded, sloped area. The existing family housing complex is located to the south of this site. The proposed site for the Installation Command Quarters unit (ICQ) is at the northeastern portion of this wooded, sloped area and consists of approximately 1.60 acres (Figure 3). The proposed site for the multi-purpose center is at the entrance to the existing family housing complex on the corner of Highway 21 and Armentrout Drive and consists of three acres (Figure 4). This site is in the developed area of the Activity and consists of a mowed lawn.

C. Purpose and Need.

Family Housing. Sugar Grove has 58 units of family housing. Military family housing requirements are estimated at 97 for current year and 121 by year 2000. Thirty-four families are currently renting in the community. Of these families, 18 are unsuitably housed according to Department of Defense (DoD) criteria for suitable/affordable housing for Military families.

Figure 3

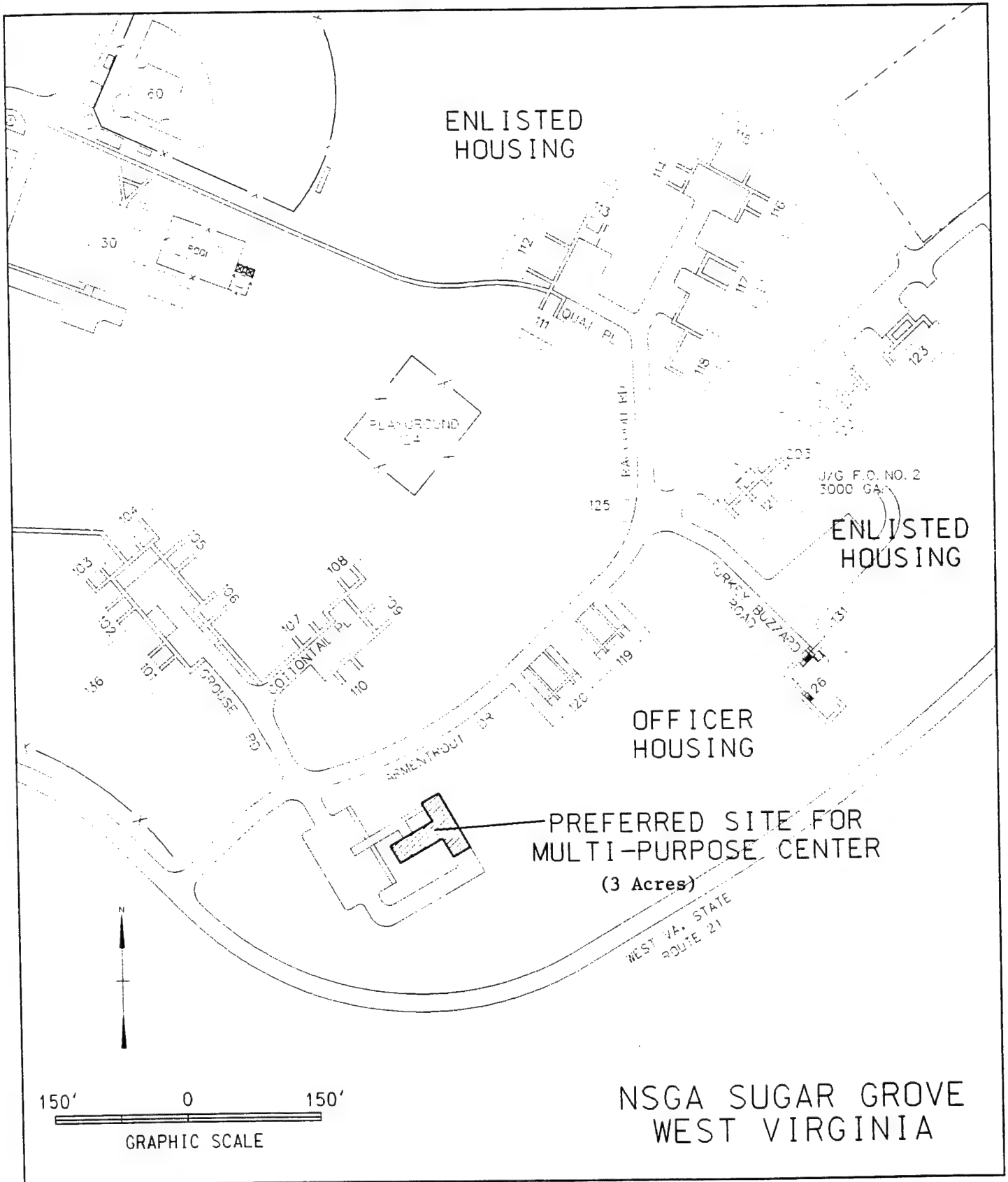


Proposed Family Housing Units, Installation Command Quarters  
and Installation Restoration Sites



Figure 4

Proposed Multi-Purpose  
Center Site



The DoD has a list of criteria that is used in determining suitable rental housing for Military families. Some of the determining factors are:

a. the rental unit must be within a sixty minute commute radius by privately owned vehicle from the Activity during rush hour traffic time frames;

b. the monthly rental cost of the unit must not exceed the maximum acceptable monthly housing cost for the Military member;

c. the rental unit must be structurally sound;

d. the rental unit must have adequate sanitary and sewage disposal facilities.

The Activity is located in a remote area between two mountain ranges and is on the Navy's Critical Housing Area (CHA) list. Military members who live off Base must travel over sharp, winding roads to reach the Base. Travel time to most outlying residential areas (Harrisonburg, VA; Elkins and Moorefield, WVA) in the vicinity takes a minimum of 60 minutes during good weather conditions. When weather conditions are poor, such as rain, fog, snow, sleet, and hail, the travel time is over an hour. Some housing that is structurally sound, is unsuitable because the commute is over one hour's drive. Poor weather conditions also increase the potential for vehicle accidents; and on occasion the main highway corridor (U.S. Route 33) to/from the Activity has been closed due to poor weather or

accidents (Family Housing Market Analysis for NSGA Sugar Grove, 1996).

Available rental housing that is within an hour commute is scarce. The majority of the housing that is available for rent and within an hour commute, does not meet DoD criteria for suitable Military housing based on inadequate heating, plumbing, sanitary, and sewage systems.

Therefore, the Military member must be involuntarily separated from his/her family, move his/her family into substandard housing, or drive beyond the 60-minute commuting distance.

Multi-purpose Center. The multi-purpose center would provide Military family support and services in one centrally located facility. It would house the family housing office, housing community center, furniture warehouse, and self-help center.

The current family housing office consists of two small adjoining rooms within the Administration Building. The building houses the offices for the Commanding Officer and Executive Officer. The two rooms that are currently utilized as the family housing office are actually Command spaces and are programmed for other staff personnel. The rooms are inadequate in size; leaving no play area for children while parents are being helped and no privacy when counseling families. This creates noise and confusion in the hallway outside the offices for the Commanding and

Executive Officers. Military families are served in an unprofessional atmosphere due to the insufficient size of the housing office. The Administrative Building is not in the immediate vicinity of the family housing complex, causing an added hardship to Military families.

A housing community center is needed for conferences, (such as landlord meetings/resident conferences), social and cultural events, and recreation activities for Military families. The housing community center will provide an outlet for those Military families who feel a sense of isolation.

The current building that houses the furniture warehouse and self-help center is in poor condition and is scheduled for demolition in 1998. This building is a 1,344 square foot sheet metal building that was constructed in 1959 and utilized as a fire station. The building is deteriorated and is utilized for vehicle storage due to the shortage of facilities at Sugar Grove. Many items cannot be maintained in this facility because they would be ruined by weather or vermin. The Activity has no other building in which to support these services. The furniture warehouse will provide storage for appliances and furnishings for Military families. The self-help center will provide literature, displays, and training areas for classes for Military families.

As discussed above, numerous factors create hardship and cause low morale for Military members and their families stationed at Sugar Grove. Housing Military families at the Activity and providing a multi-purpose center would lessen their burdens, improve morale, and create a better quality of life.

## II. Alternatives

Alternatives were assessed based on the concepts presented in the Navy Neighborhoods of Excellence Visual Guide and environmental criteria.

The Navy Neighborhoods of Excellence Visual Guide emphasizes the need to improve the quality of life for Military families. This concept incorporates:

- 1) quality Military family housing facilities, neighborhoods, and family support facilities;

- 2) main entrances should be distinct, attractive, and inviting;

- 3) housing complexes and family support facilities should be arranged logically, and functionally to allow for open space areas, which reduces stress, enhances habitability, and instills pride and professionalism;

- 4) Military family neighborhoods should have convenient common-use facilities which promote involvement, interaction, and a sense of belonging;

5) architect style should be compatible with the environment.

The following environmental issues were assessed in evaluating the proposed action:

- 1) impact to the wooded area;
- 2) impact to wildlife;
- 3) impact to wetlands;
- 4) impact to threatened/endangered species;
- 5) impact to the community (socioeconomic);
- 6) impact to cultural resources;
- 7) impact to utilities.

Three alternatives were evaluated:

- 1) Construct Units on the Naval Activity
- 2) No Action
- 3) Public/Private Venture

A. Construct Units on the Naval Activity. Military construction at an off-Base site was not considered a reasonable alternative because acquisition of privately owned land can only be justified if no existing sites are available on Government owned property. This alternative would construct 23 units of family housing at NSGA Sugar Grove. Under this alternative three potential sites were evaluated.

The first potential site was the existing family housing complex. Construction of the proposed units would infill open land areas that lie between existing sections of

family housing units. This alternative would impact the existing playground such that it would be eliminated, and increase the housing density in this area which would destroy the current small open land areas that exist between the family housing units (Figure 5). Constructing family housing units at this site would create congestion, destroy the existing logical arrangement of family housing, and destroy the developed open landscape in the area. The children's playground qualifies as a common-use facility, instilling a sense of neighborhood and encouraging interaction between Military families.

This potential site was not selected because it would adversely impact the existing family housing and playground in the area and does not support the Navy Neighborhoods of Excellence concepts.

The second and third potential sites are on the east side of the Activity, north of the existing family housing. This area is a wooded, sloped parcel (hereinafter referred to as the "hill").

The first development plan would extend Armentrout Drive through the wooded area to the ICQ site onto Highway 21. This plan extends Armentrout Drive approximately 1,700 linear feet. Under this plan the housing units would be aligned in a single row on the eastern side of Armentrout Drive (Figure 6). The plan would impact the entire 15.06 acre wooded parcel, leaving no land area at this site for



Figure 5

Potential FHU Site

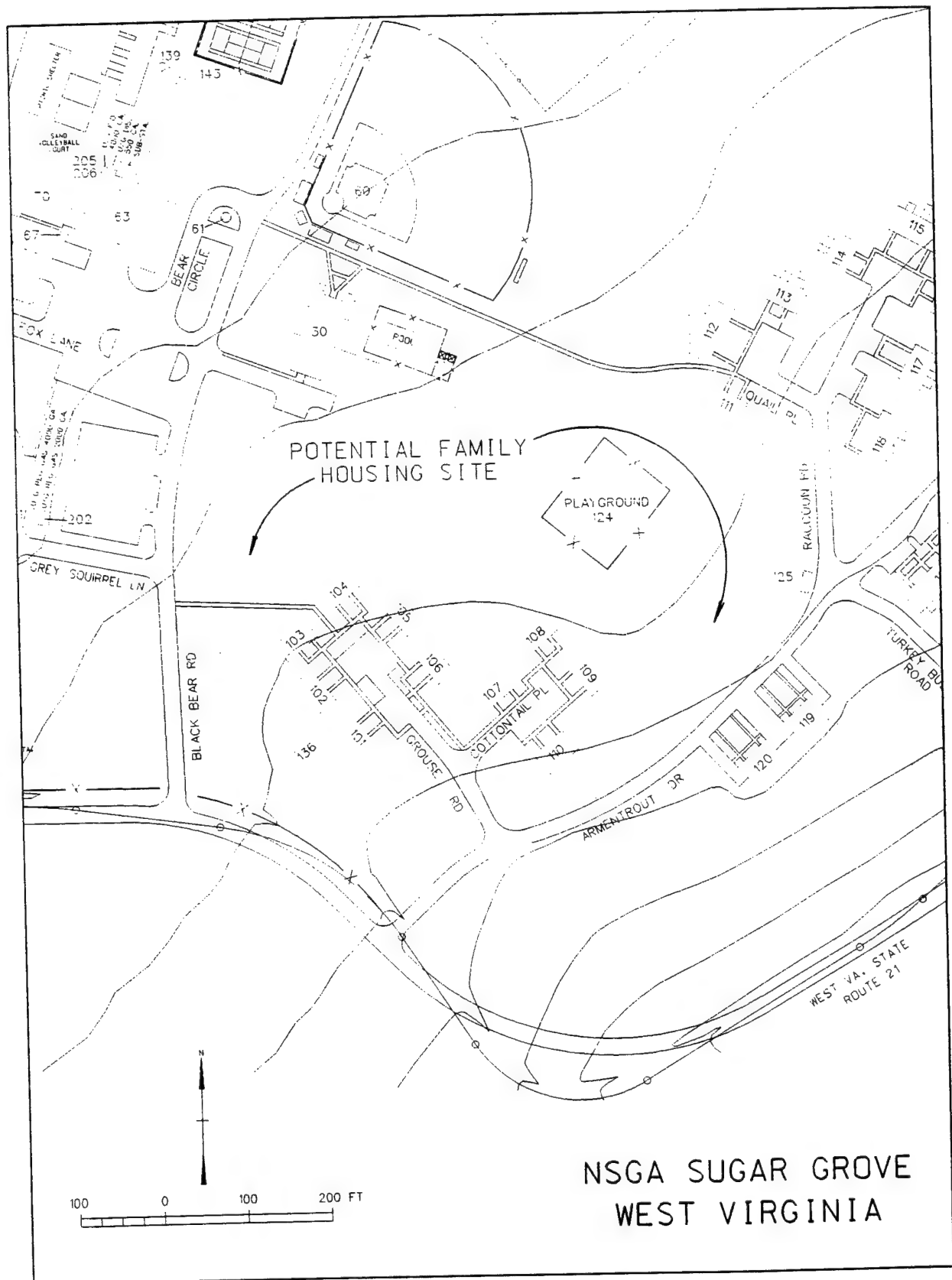
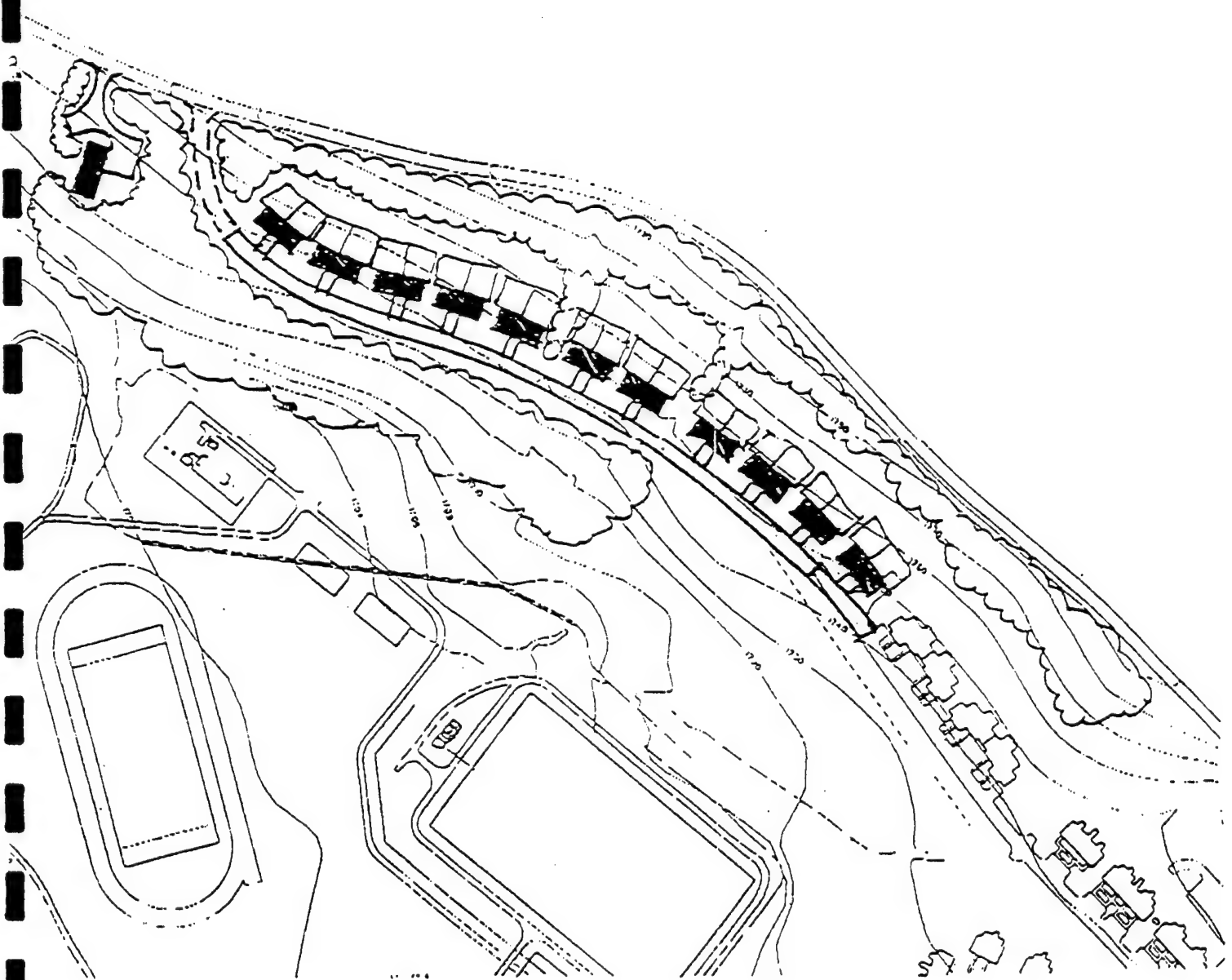


Figure 6  
Potential Design Plan



= Proposed Duplex Family Housing Unit

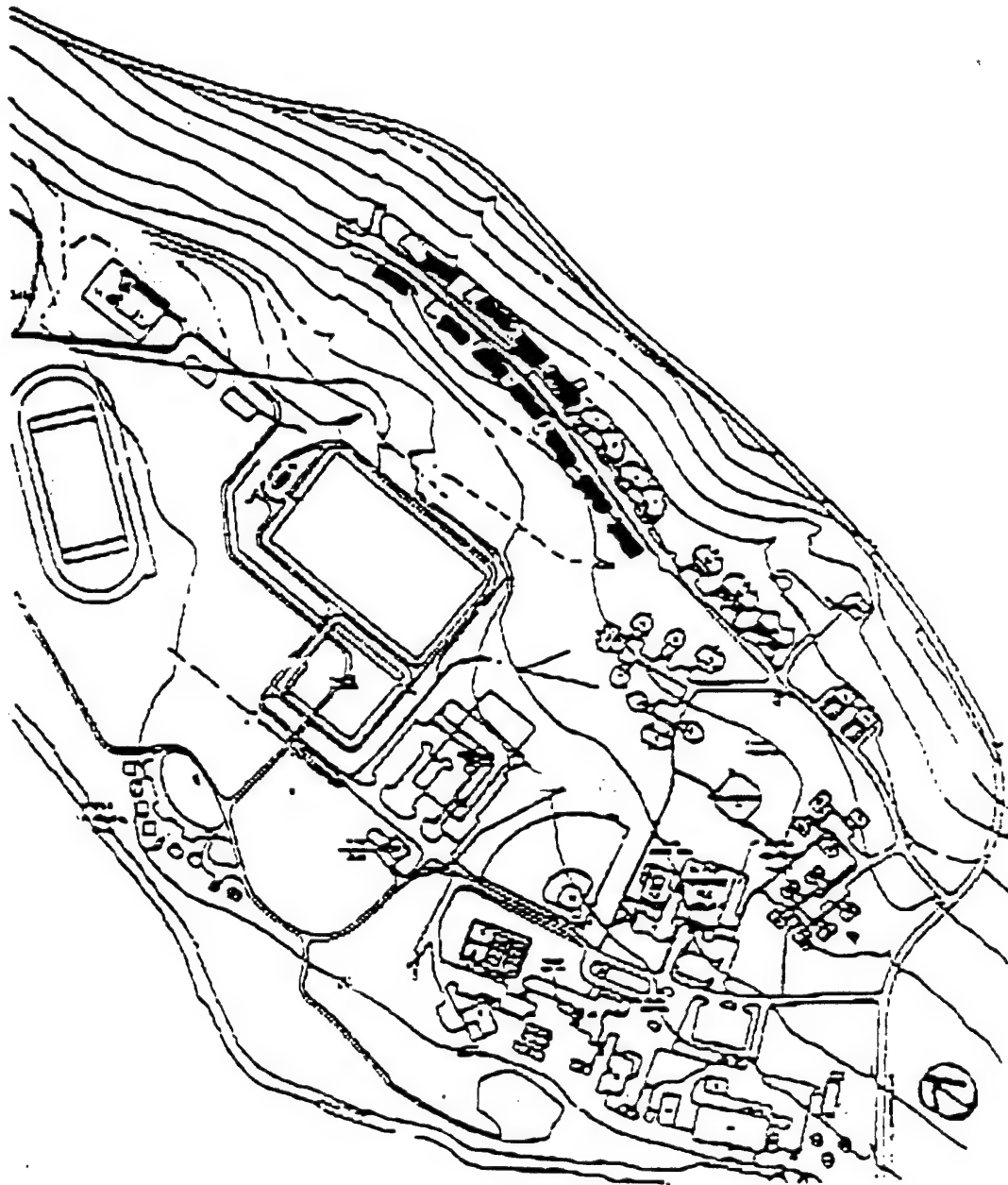
future family housing development. This plan would cost more because Armentrout Drive would be extended to the end of the wooded area. Therefore, this plan was not selected.

The second development plan would extend Armentrout Drive just past the last proposed duplex unit, allowing enough roadway for vehicles to turn around. This plan extends Armentrout Drive approximately 800 feet. Under this plan housing units would be constructed on the east and west sides of Armentrout Drive (Figure 7). Several duplex units would be constructed in front of existing family housing units. Although this plan would probably require fill for the development site on the western side of Armentrout Drive, the amount of wooded area impacted would be less. This plan would impact approximately 9.02 acres of the wooded parcel, allowing for future family housing development in the area between the proposed ICQ and family housing units.

The ICQ is sited on the northern portion of the hill, separate from the proposed Junior Enlisted housing for several reasons. Siting the ICQ at the northern end of the hill allows for future family housing development, which would probably be sited in the wooded area between the proposed ICQ and family housing units. Historically ICQ's are set apart from family housing because the ICQ is the resident for the most senior officer. Junior Enlisted (E1-E6) families are usually young with small children. The

Figure 7

Preferred Design Plan



■ = Proposed FHUs

children play noisily with each other, their toys, and pets. They ride their bicycles in the only street which would access the ICQ. Typically, the Installation Commander's family is grown. The Installation Commander's position is one of prestige that involves entertaining higher ranking military personnel, government officials, and civilian dignitaries. Traditionally, on military installations, officers and enlisted personnel reside in separate areas. The Code of Military Justice does not permit fraternization between officers and enlisted personnel. A separate entrance (a private driveway from Highway 21) would provide access to the ICQ and eliminate the need to extend Armentrout Drive an additional 900 feet. This is the preferred development plan.

No other site for the ICQ was identified that would provide separation between the family housing units and the ICQ unit due to wetlands, installation restoration sites, and developed land areas.

B. No Action. Under this alternative, the Military family housing deficit and Military family low morale issues at Sugar Grove would remain. Currently thirty-four Military families reside in the community. However, projections indicate that Base loading will continue to increase and, without additional Military family housing, there will be an increase in the shortage of suitable housing.

The Activity is in an isolated area, sitting between two large mountain ranges. Rental housing in the market area is scarce. Military members who rent in the community are required to drive winding roads that are particularly hazardous during inclement weather. Those families residing in Harrisonburg have a minimum one hour commute over very steep, winding mountain roads. Poor weather conditions such as fog, rain, sleet, snow, and hail make this commute even more dangerous. U.S. Route 33, the main corridor to the Activity, is closed several times a year due to poor weather conditions and/or vehicle accidents. The lack of suitable rental housing in the area creates an enormous problem for Military families. This situation forces some families to be involuntarily separated and others to live in substandard housing or face excessive commutes.

The no action alternative does not incorporate the Navy Neighborhood of Excellence concepts, nor does it aid in decreasing the Military family housing deficit.

C. Public/Private Venture. Several areas have been targeted for potential PPV endeavors; Sugar Grove is not one of those areas. The bidding climate for private contractors is less than enthusiastic in the Sugar Grove area because of the cost of transporting supplies and building materials to the site (which sets between two mountain ranges), and the nonavailability of temporary residences for construction

workers. This alternative is considered infeasible and will not be discussed further.

Two alternatives were evaluated for construction of the multi-purpose center. They were:

- 1) Construct the Center on the Naval Activity
- 2) No Action.

D. Construct the Center on the Naval Activity. This alternative would construct a 7,755 square foot multi-purpose center. The center would house the family housing office, furnishings warehouse, housing community center, and self-help center.

The family housing office is located in Command spaces in the Administration Building which is not in the vicinity of the family housing complex. The two rooms that are utilized as the family housing office are inadequate in size. The insufficient office space does not allow Military families' privacy while being counseled and does not allow space for a children's play area. The building that houses the self-help center and furnishings warehouse is scheduled for demolition. The building, an old fire station, is a dilapidated sheet metal building. It is being utilized for vehicle storage, a storage facility for furniture, and a self-help center because Sugar Grove does not have adequate facilities to support these functions.

Construction of the multi-purpose center would create a facility in which social events and



meetings/conferences could be held for/by Military families. The family housing office would have adequate space in which to serve Military families and the self-help center would have adequate space for literature, displays, and training areas for Activity residents. The furnishings warehouse would be easily accessible to delivery truck drivers and would be in the vicinity of the family housing complex. Construction of the multi-purpose center provides a common-use facility in which community involvement is promoted, and Military families can be served in a private, professional atmosphere.

Two potential sites were evaluated for the multi-purpose center. Both sites are within the family housing complex. The first site is adjacent to the Youth Center. This site was not selected because the land capacity could not accommodate the facility, playground equipment has been purchased for this land area, and delivery trucks/traffic would have to drive through the housing complex to access the facility (Figure 8). Traffic in this area presents a potential danger to young children who might be playing in the streets.

The second site is at the entrance to the family housing complex. This location can easily be accessed from Highway 21 (which borders the Activity on the east and south) by delivery truck drivers and Military members living off-Base without driving through the family housing complex

(Figure 8). In implementing the Navy Neighborhoods of Excellence concepts, main entrances create the first visual impression and should be attractive and inviting. This location provides a good visual landmark for the entrance into the family housing complex. Approximately three acres of this site, which is mowed lawn, would be impacted. This is the proposed site.

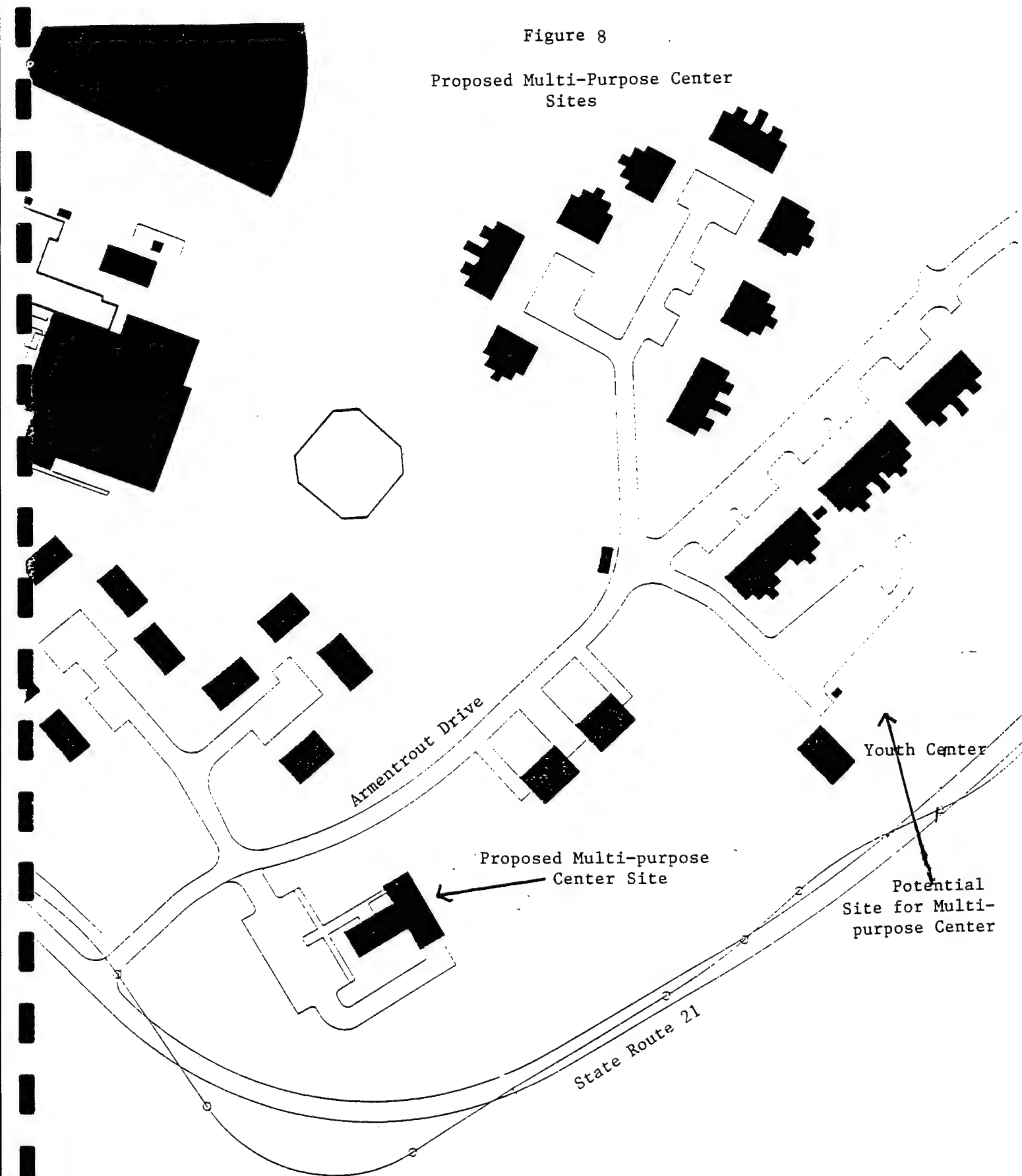
No other parcel was identified as a potential site for the multi-purpose unit that could provide:

- 1) proximity to the family housing complex;
- 2) enough acreage to house the multi-purpose unit;
- 3) compatible land use.

E. No Action. The no action alternative would put the furnishings warehouse and self-help center in jeopardy; as the building they are housed in is scheduled for demolition. There are no other buildings on the Activity that can accommodate these services. Services provided by the family housing office staff would continue to be provided in cramped space; as the office is inadequate in size. Additionally, the family housing office space is incompatible with the command spaces. Military family morale would continue to be low and Military families would continue to feel a sense of isolation as there is no facility in which to hold social events, physical activities, and meetings and conferences.

Figure 8

Proposed Multi-Purpose Center  
Sites



The no action alternative does not support the quality of life initiatives which are reflected in the Navy's Neighborhoods of Excellence concept.

### III. Affected Environment

A. General Land Use. The Support Area consists of approximately 118 acres. The Support Area is comprised of the administrative, public works, personnel support functions, and Military family housing. Approximately 88 acres of the Support Area is developed land.

Future land use plans recommend additional family housing (Master Plan NSGA Sugar Grove, 1989). The proposed development site for construction of the ICQ and family housing is a wooded, sloped area consisting of approximately 15.06 acres. Approximately 7.42 acres of this site would be impacted by construction of family housing and 1.60 acres would be impacted by construction of the ICQ. The area that would be impacted by construction of the multi-purpose center sits at the entrance to the family housing complex and consists of three developed acres.

B. Wetlands. The land area located at the bottom of the hill of the proposed family housing site can be described as "boggy". This area, below the 1,720 foot contour, is a jurisdictional wetland classified under Cowardin as a Palustrine Emergent Persistent Seasonal

wetlands (PEM1C). This is because the land has become a holding basin for the stormwater runoff from the hill and from seasonal high water table seepage at the base of the slope. This wetland provides filtration for sediments before water is absorbed into the ground.

At the top of the hill are two concrete culverts under Highway 21 that convey stormwater runoff from the eastern side of the Highway onto the hill. This has created two swales that transport stormwater runoff to the wetlands at the base of the slope. Also, another swale on the hill was created by nature. These three drainage swales located on the hill of the proposed family housing site have an average depth of one foot and average width of two feet. The vertical drop averages a ten percent grade. The swales are not considered to be jurisdictional wetlands or perennial streams. These swales are dry out-washes, and therefore, do not meet the seven consecutive day saturation criteria of wetland hydrology, since they are saturated only when heavy rainfall runoff conditions exist. Wetland vegetation is not present in the swales.

The predominate vegetation at the proposed development site on the hill has a wetland indicator status of facultative upland (FacU), upland (Upl), and no indicator status (NI). These include:

Herbs

Goldenrod (Solidago erecta) - FacU

Bottlebrush grass (Hystrix patula) - Upl

Teasel (Dipsacus sylvestris) - NI

Trees and Shrubs

White pine (Pinus strobus) - FacU

Red cedar (Juniperus virginiana) - FacU

Black locust (Robinia pseudoacacia) - FacU

Cherry birch (Betula leutea) - FacU

Wetlands are not present within the footprint of the proposed family housing site, since none of the three criteria for jurisdictional wetland consideration (vegetation, soil, or hydrology) are met.

The only wetlands in proximity to the proposed development site are located below the 1,720 foot elevation, approximately 200-300 feet from the development site. The absence of jurisdictional wetlands at the proposed development site was further verified by field reviews of wetland mapping at the Activity conducted in June of 1995 by a private contractor via Memorandum of Agreement between the Department of the Navy and the Fish and Wildlife Service.

There are no wetlands at the proposed development sites for the multi-purpose center, ICQ, or family housing units.

C. Soils/Hydrology. NSGA Sugar Grove sits between two mountain ranges and is basically a flat terrain with steep foothills. The majority of the soils at the Support Site are Monongahela or Ernest silt loam. Stormwater runoff is very rapid, causing high erosion. Buildings are not constructed in areas that are subject to inundation. The proposed development sites for the multi-purpose center, ICQ, and family housing units are on hills. Stormwater

runoff at the Support Area drains into the South Fork River, which borders the Area on the west. Vegetated swales convey stormwater runoff to the South Fork River.

D. Threatened and Endangered Species/Vegetation and Wildlife. There are two Federally listed endangered species within the range of Pendleton County. They are the Virginia big eared bat (Plecotus townsendii virginianus) and the Indiana bat (Myotis sodalis). These species are known to dwell in caverns.

The West Virginia Heritage Program has a list of plant species of special concern. One species, a grass Paspalum setaceum, is known to occur at the Support Site. Other vegetation include Virginia creeper, Queen Anne's Lace, Common and Giant Ragweed, Mountain Laurel, and Spicebush.

The wooded area consists of pole-sized stands of conifers and a few hardwoods. Tree species include red cedar, Virginia pine, white pine, black locust, cherry birch, and dogwood. Approximately 250 trees including saplings and small trees would be removed.

Wildlife at the Support Area include white-tailed deer, fox, rabbit, skunk, squirrel, various small rodents, and endemic birds. According to Naval Activity personnel, the white-tailed deer seen at the Support Area also roam the wooded areas to the east and northwest of the Activity.



E. Historic/Cultural Resources. The proposed project area for the family housing units is a wooded parcel that exhibits a 20 degree gradient slope on a hill with elevations ranging from 1720 to 1790. Due to the terrain of the site, there is relatively low potential for presence of archaeological features.

F. Socioeconomics. Thirty-four Military families currently reside in the local economy. With the anticipated growth of the Activity, this figure will increase if Military family housing is not provided. Suitable rental units are very scarce in the NSGA Sugar Grove rental market area. Most housing is owned by life-long residents of the area and passed to family members. Other housing consists of vacation homes which sit vacant most of the year.

The counties in the housing market area derive economic stability from manufacturing, tourism, agriculture (both vegetative and poultry), services (finance, insurance, wholesale and retail trade, communications), and retirees.

School age children whose parents reside at Sugar Grove or in Pendleton County attend the public schools in that County. School age children whose parents reside in Harrisonburg, Virginia, attend the public schools in Virginia.

G. Air Quality. Pendleton County, West Virginia is in attainment for the six criteria pollutants listed in the National Ambient Air Quality Standards (NAAQS) as

established by the Environmental Protection Agency under the Clean Air Act.

H. Contaminated Sites. In 1988 a Preliminary Assessment (PA) report by Naval Energy and Environmental Support Activity identified two disposal sites (IR Sites 2 and 3, see Figure 3) within the Support Area of the Base. The PA determined neither site posed a risk to human health or the environment. Therefore, neither site was recommended for further study under the Navy's Installation Restoration (IR) program.

From 1968 to 1970, three to four burn pits were used for the disposal of Base generated waste. The type of wastes reportedly disposed of at IR Site 2 included household trash, kitchen waste, scrap wood, scrap metal, paper, and cardboard. Each pit was excavated to a depth of six feet, a width of eight feet and a length of ten feet. Waste was disposed of in a pit twice per week and burned in the pits. After a pit was filled with burned waste, two feet of soil was backfilled over the pit with a bulldozer. The area is currently overgrown with trees and grass and shows no signs of stress. Since no hazardous waste was supposedly disposed of at IR Site 2, no further studies were recommended for IR Site 2 under the Navy's IR program. In 1970, disposal of Base generated waste stopped at IR Site 2.

From 1970 to 1978, two areas (IR Site 3) separated by an earthen drainage ditch were used for the disposal of Base

generated waste. The type of wastes reportedly disposed of at IR Site 3 included disposal of household trash, empty exterior and interior paint cans, empty drums of paint thinner, air conditioning filters, scrap wood, and scrap metal. Common practice was to dig trenches 30 feet long, 12 feet wide and down to the first shale deposit encountered (about 8 feet). Waste was disposed of in the trenches twice a week. After a trench was filled with waste, the trench was backfilled with about one foot of soil. No waste burning reportedly took place. Since no hazardous waste was supposedly disposed of at IR Site 3, no further studies were recommended for this site under the Navy's IR program.

I. Utilities. Electric power for the Support Area is supplied by and purchased from the Monongahela Power Company.

The Activity has a wastewater treatment plant that is capable of handling 50,000 gallons of wastewater per day. The present system consists of two pools, one is used for treating the water and the second is used as a holding pond for the treated water. A new wastewater treatment plant is under construction and scheduled for completion in early 1997. The new plant will eliminate the need for the holding pond. After the sewage is treated, it will be discharged to the South Fork River.

Solid waste is removed from the Base by a contractor, Peer Sanitation Services.

Natural gas is utilized for some cooking and heating. Natural gas is provided by and purchased from Mountaineer Gas Company.

Potable water is pumped from the South Fork River and treated on Base. Average yearly water consumption is 9,460,000 gallons. A new water treatment plant is under construction and scheduled for completion in early 1997. There is no potable water distribution at the proposed development sites for the ICQ and family housing.

J. Transportation. Public transportation is offered in the Sugar Grove area on Fridays only. Thirty-four Military families reside in the local economy; therefore commuting to/from the Base daily. The closest community that might offer rental housing is almost an hour's drive from the Activity. This drive is along a winding, mountainous two-lane road, with little to no shoulder. Poor weather conditions make this drive even more dangerous. The construction of 23 Military family housing units on Base will create a reduction in the number of vehicles traveling to/from the Activity; reducing traffic on the main thoroughfare (Route 33) to the Activity.

#### IV. Environmental Impacts

A. General Land Use. The Support Area is approximately 118 acres. The Support Area provides services

to Military members and their families. There are currently 58 Military family housing units at the Support Area. Additional Military family housing is recommended for the Support Area. The proposed project will displace approximately 9 acres of forest. Approximately 6 acres of forest land will remain at the Support Area after the development of the proposed project. This wooded land area could be developed for family housing in the future; in the interim, it allows a natural setting for wildlife and nature trails.

B. Wetlands. A boggy parcel sits at the bottom of the hill, outside of the construction areas for the proposed development sites for the ICQ and family housing units. This area is a jurisdictional wetlands. This wetlands has become a holding basin for stormwater runoff from the hill and from seasonal high water table seepage at the base of the hill. This wetland would be protected from soil/sediments during construction by utilizing best management practices (i.e. hay bales, silt fencing).

There are three drainage swales on the hill that convey stormwater runoff down the hill. These swales do not meet the seven consecutive day saturation criteria of wetlands, since they are saturated only when heavy rainfall runoff conditions exist. Wetland vegetation is not present in the swales. Should these swales be filled in due to the site design for the family housing units, mitigative

measures would be implemented to create new swales on the hill at other locations.

There are no wetlands at the proposed development sites for the ICQ, family housing units, and multi-purpose center.

C. Soils/Hydrology. Most of the soils at Sugar Grove have low moisture holding capacity and high erodibility. The proposed development sites are on hills, therefore they do not become inundated with rain water.

The creation of 23 units of family housing and a multi-purpose center will create an increase in stormwater runoff due to the impervious surfaces that will be constructed (extension of Armentrout Drive, concrete carports, patios, and a parking lot). Stormwater runoff at the Activity is conveyed by a system of vegetated swales which discharge into the South Fork River which borders the Activity on the west. The South Fork River is classified as a high quality stream by the West Virginia Department of Natural Resources. Stormwater runoff at the proposed development site would be handled by creating new vegetated swales to feed into the Activity's existing system.

Best management practices to minimize soil erosion and sedimentation deposit would be implemented during construction (i.e., hay bales, silt fencing).

D. Threatened and Endangered Species/Vegetation and Wildlife. Two Federally listed endangered species are known to inhabit the general vicinity of the community of Sugar Grove. They are the Virginia big-eared bat (Plecotus townsendii virginianus) and the Indiana bat (Myotis sodalis). Historically, these bats dwell in caverns and their site selection for summer maternity colonies and night roosts vary. There are no caverns at the Support Area and the Natural Resource Specialist at Sugar Grove has not observed any bats nesting at the Support Area. The Support Area does not provide suitable habitat for bats.

A grass species listed as special concern by the West Virginia Heritage Program is known to occur at the Support Area. This species, Paspalum setaceum, is not on the Federal List of Threatened and Endangered Species and has not been observed at the three proposed development sites.

Approximately 250 trees, including saplings and small trees would be removed for construction of the family housing units. Disposal of the trees would be by construction contractor.

Wildlife that dwell in the proposed family housing development site could migrate further into the adjoining woods or to the wooded areas east and northwest of the Activity. Personnel at the Activity have observed that white-tailed deer roaming the Activity also roam adjacent

wooded areas in the vicinity. There would be 6.04 acres of wooded area remaining after construction of the proposed project. No major impact to wildlife would occur as a result of the proposed development.

E. Historic/Cultural Resources. The West Virginia Division of Culture and History was informed of the proposed project and the Navy's determination of "no effect" to cultural resources. Originally, the West Virginia Division of Cultural and History disagreed with the Navy's determination and recommended a Phase I archaeological investigation be conducted; however, after consultation with Atlantic Division Naval Facilities Engineering Command's Archaeologist, the Division reconsidered their recommendation and agreed that the proposed project will have "no effect" on archaeological or historical sites (Attachment 1).

F. Socioeconomics. NSGA Sugar Grove is a small Activity with a total of approximately 253 Military and civilian personnel.

Construction of 23 Military family housing units would not accommodate all the Military families residing off-base. Therefore, some Military families stationed at Sugar Grove would still reside in the community. Overall, the impact to the local economy would be minimal, as the Military families stationed at Sugar Grove, whether residing in the community or at the Activity, support the local



economy (i.e. grocery shopping, restaurants, clothing stores, hardware store, etc.). The closest supermarket is in Harrisonburg, Virginia (an hour's drive) and the closest commissary is in Bethesda, Maryland (approximately 200 miles).

The majority of Military families who would move into the proposed Base housing are lower grade enlisted personnel consisting of couples and couples with small children. The current maximum number of school age children that could transfer from the Virginia school system to the Pendleton County, West Virginia school system would be eight. It is unlikely that such a small number of children would substantially impact the Pendleton County school system..

Pendleton and surrounding counties thrive economically from agricultural, tourism, manufacturing, services, and retirees.

G. Air Quality. Pendleton County, West Virginia is in attainment for the six criteria pollutants established by the National Ambient Air Quality Standards (NAAQS). The Clean Air Act General Conformity Rule applies only to actions that generate emissions in nonattainment or maintenance areas. Therefore, a conformity determination is not required for this project.

Air emissions associated with this project would be short-term in duration, occurring only during the

construction time frame. The reduction in vehicular traffic commuting to the Activity as a result of the proposed action creates a positive long term impact on air quality by decreasing the amount of exhaust emitted from vehicular traffic.

H. Contaminated Sites. Since neither of the two IR disposal sites at the Support Area is located within or adjacent to the proposed location of the family housing units, the contaminated sites should have no impact to the project.

IR Site 3 is the closest disposal site to the proposed family housing location. It is approximately 700 feet northwest of the proposed site. IR Site 2 is approximately 1,400 feet west of the proposed family housing site (Figure 3).

I. Utilities. Electric power is supplied by Monongahela Power Company. The electrical utilities are adequate for the increase anticipated by the proposed project. Natural gas is supplied by Mountaineer Gas Company. The existing pipeline that conveys natural gas to the Base is capable of handling the increase associated with the proposed project. Solid waste is removed from the Activity by Peer Sanitation Services. The handling capacity is unlimited. A wastewater treatment plant is located on the Activity. The plant capacity is 50,000 gallons per day. This system is capable of handling the increase associated

with the proposed project. A new wastewater treatment plant is under construction and will be completed in early 1997, prior to completion of the proposed project. The new plant will eliminate the need for the current holding pond. Wastewater from the proposed family housing units and multi-purpose center would be treated at the new plant. Wastewater at the ICQ site would be handled by one of the two following systems: 1) septic tank/cesspool system. A truck would periodically pump out the septic tank/cesspool. The necessary permits for the septic tank/cesspool system would be obtained before the system is installed; or 2) wastewater collection system. Wastewater would be discharged to a new collection system which would transport the waste to the new treatment plant currently under construction. The preferred infrastructure is the septic tank/cesspool system because the other system would entail more land disturbance, as trenches would have to be dug and backfilled for the installation of pipes.

Potable water is pumped from the South Fork River and treated on Base. The current water treatment plant is capable of handling the increase associated with the project. The proposed family housing units and multi-purpose center would obtain water from the Base system. The ICQ would obtain water by tapping into the water main at the proposed family housing site. A two foot wide trench would be dug by backhoe method to lay an eight inch waterline

through the wooded area between the proposed family housing units and the ICQ site. This would impact the vegetation in the path of the two foot wide trench. This vegetation would be removed; however, some of the vegetation would naturally revegetate. There are no endangered species, wetlands, or cultural resources in this area.

J. Transportation. As a result of the proposed action, 23 families now residing in the community would relocate to the Navy Installation. This would have a positive impact on the amount of traffic traveling on Route 33 which is the main corridor to NSGA Sugar Grove. Less traffic on this corridor would reduce the potential for vehicle accidents/fatalities.

K. Environmental Justice in Minority Populations and Low-Income Populations: The Navy has not directly or indirectly used criteria, methods, or practices that discriminate on the basis of race, color, or national origin. In addition, the Navy has analyzed the economic and social impacts of the proposed project and determined that any economic impacts would be minimal, as the construction of family housing on Base does not totally eliminate the need for Military families to reside in the community. Military families would continue to support the local economy whether residing on Base or in the community, as the Activity has a small Navy Exchange that is comparable to a mini-market. The closest supermarket is in Harrisonburg,

Virginia (approximately one hour's drive) and the closest Military commissary is in Bethesda, Maryland (approximately 200 miles).

The majority of Military families who would move into the proposed Base housing are lower grade enlisted personnel consisting of couples and couples with small children. The current maximum number of school age children that could transfer from the Virginia school system to the Pendleton County, West Virginia school system would be eight. It is unlikely that such a small number of children would substantially impact the Pendleton County school system.

No significant adverse environmental impacts on minority and low-income communities are anticipated as a result of the proposed action.

## **V. Coordination**

The West Virginia Division of Culture and History was informed of the proposed project and the Navy's determination of "no effect" to cultural resources. The Division concurred that the proposed project will have no effect on any archaeological or historical sites listed on or eligible for listing on the National Register of Historic Places (Attachment 1).

The County Highway Department and West Virginia Department of Transportation will be informed of the proposal to construct a private driveway from the ICQ to Highway 21 and permission to connect the driveway to State Route 21 would be requested.

#### VI. Mitigation

Best management practices would be implemented to minimize adverse impacts to the environment.

Stormwater runoff is handled by a system of vegetated swales which collect and transport stormwater runoff into the South Fork River. The proposed project would also utilize this system. Swales would be created at the development sites to transport stormwater runoff into the South Fork River. Natural vegetation would be allowed to grow in the swales to aid in rain water absorption and filtration of sediments. The three drainage swales located on the hill may have to be filled due to the design layout of the proposed family housing units. Should this occur, mitigation measures to create three swales at other locations on the hill would be implemented. The Activity is scheduled to have a Stormwater Pollution Prevention Plan conducted soon which will provide suggestions for better stormwater management.

The wetland that sits below the proposed family housing development site would be protected from soil and sediments during construction by utilizing hay bales and silt fencing.

Other areas would also be protected during construction in the same manner. Soils would be watered as needed to prevent dust from blowing during construction.

The development plan that would allow for future family housing development and a natural setting for wildlife and nature trails in the interim was selected.

Wildlife which inhabit the proposed development site have other woodlands into which they can migrate. These areas include the woods remaining at the Activity, the woods to the east, and the woods to the northwest of the Activity.

Once construction is complete, grass would be planted as well as native ornamental vegetation; and mulch would be placed around the vegetation to aid in sediment filtration and water absorption.

Should any archaeological or historical sites be encountered during construction activities, such activities will cease and the West Virginia Division of Culture and History will be contacted.

## **VII. Cumulative Impacts**

This project would develop approximately 9.02 acres of woodland. There would be 6.04 acres of woodlands left at

the Support Area that may be developed for family housing at some time in the future. The site for the multi-purpose center is already developed land.

The proposed project area is adjacent to the family housing area. Constructing family housing and family support services in the same vicinity creates a sense of community and better quality of life for Military families.

This project will not have any significant cumulative adverse impacts on the environment.

#### VIII. Conclusion

The construction of 23 Military family housing units, and a multi-purpose center to house the family housing office, furnishings warehouse, self-help center, and family community center is the preferred alternative.

No significant long-term or short-term adverse impacts on the natural environment would occur as a result of the proposed project. The reasons for lack of significant adverse impacts are the mitigation measures to be implemented and the physical characteristics of the sites selected for development. The site for the multi-purpose center is a developed area. The proposed development site for the family housing units and ICQ consists of a total of 15.06 acres of woodlands of which 9.02 acres would be impacted by the action, leaving 6.04 acres for possible



future family housing development and a natural setting for wildlife/nature trails in the interim. No threatened or endangered species would be adversely effected.

    This project improves the quality of life for Military families.

## IX. Attachments



DEPARTMENT OF THE NAVY  
ATLANTIC DIVISION  
NAVAL FACILITIES ENGINEERING COMMAND  
1510 GILBERT ST  
NORFOLK, VA 23511-2699

TELEPHONE NO

804 322-4893  
IN REPLY REFER TO

5090  
2032MM

29 JAN 1996

Ms. Susan Pierce  
Division of Culture and History  
State Historic Preservation Office  
Culture Center  
Charleston, West Virginia 25305

Dear Ms. Pierce:

The Navy is proposing to construct 23 units of military family housing at Naval Security Group Activity (NSGA) Sugar Grove, West Virginia. Sugar Grove is located in southeastern Pendleton County. (see enclosure 1)

The site for the proposed housing is a rocky, steep, 30 degree sloped area consisting of evergreens and a few hardwoods. Approximately nine acres of this site would be impacted by the proposed housing construction. (see enclosure 2)

Due to the terrain of the proposed site, there is relatively low potential for presence of archaeological features. It is our opinion that this project would have no effect on cultural resources. As required under Section 106 of the National Historic Preservation Act, we request your concurrence on our finding of no effect.

Our point of contact is Cultural Resources Specialist, Bruce J. Larson. He can be reached at (304) 322-4885.

Sincerely,

*Charles W. Walker*

CHARLES W. WALKER P. E.  
Head, Environmental Planning Branch  
By direction of the Commander

Enclosures

Attachment A  
39-1

Quality Performance ... Quality Results



WEST VIRGINIA DIVISION OF  
CULTURE AND HISTORY

June 3, 1996

Ms. Maxine Milbourne  
NEPA Documents Section  
Naval Fac. Engineer Comm.  
Atlantic Division  
1510 Gilbert Street  
Norfolk, VA 23511-2699

RE: Construct 23 Unit Housing at NSGA Sugar Grove  
FR: 96-334-PD

Dear Ms. Milbourne,

At the request of your agency, our office has reconsidered our recommendations for a Phase I archaeological investigation of the above referenced project area.

Recent telephone conversations with Mr. Bruce Larson, Archaeologist indicate that the project area is found in an area exhibiting a slope gradient between 18-30%, with an average gradient of 20%. In addition, there are no rock outcroppings in the area, which might suggest the presence of rockshelters. Finally, the area has low archaeological potential.

The presence of excessive slopes and low potential for archaeological resources negates the necessity of an archaeological investigation. Therefore, an archaeological investigation is no longer necessary for the above referenced project area. It is our opinion that the above referenced project will have no effect on any archaeological or historical sites listed on or eligible for listing on the National Register of Historic Places. However, if any archaeological or historical sites are encountered during construction activities, all such activities shall cease and our office contacted immediately.

We appreciate the opportunity to be of service. If you have any questions, please contact Patrick Trader, Senior Archaeologist.

Sincerely,

Susan M. Pierce  
Deputy State Historic Preservation Officer  
for Resource Protection

SMP:PDT

Attachment A

THE CULTURAL CENTER • 1900 KANAWHA BOULEVARD, EAST • CHARLESTON, WEST VIRGINIA 25305-0300  
TELEPHONE 304-558-0220 • FAX 304-558-2779 • TDD 304-558-0220

## X. References

Family Housing Office, Naval Security Group Activity Sugar Grove, WVA

Robert Rodgers, Project Manager, Booker Associates, Inc., 1139 Olive Street, St. Louis, Missouri

DD Form 1391; Naval Security Group Activity Sugar Grove, WVA; 1995

David James, Soil and Water Conservationist, Atlantic Division, Naval Facilities Engineering Command Norfolk, VA

Draft Land Management Section for Soil-Water-Grounds Maintenance, Naval Radio Station, Sugar Grove, West Virginia; Soil Conservation Service, USDA

Fish and Wildlife Management Section; Naval Radio Station Sugar Grove, WVA

Garland Rose, Public Works Office, Sanitary Sewage System, Naval Security Group Activity Sugar Grove, WVA

Garnett Gregory, Fire Chief, Fire Department, Naval Security Group Activity Sugar Grove, WVA

Jack Hedrick, Assistant Public Works Office, Naval Security Group Activity Sugar Grove, West Virginia

Naval Radio Station Sugar Grove, West Virginia Master Plan; 1989

Navy Neighborhoods of Excellence Commanding Officer's Visual Guide to Quality Navy Family Housing; prepared by Naval Facilities Engineering Command; 1993

Outdoor Recreation Management Section; Naval Radio Station Sugar Grove, West Virginia

Preliminary Draft Family Housing Market Analysis for Naval Security Group Activity Sugar Grove; 1995

Soil Survey Report for Naval Radio Station Sugar Grove, West Virginia; Soil Conservation Service, Franklin, West Virginia

Steven Niethamer, Natural Resources Specialist, Naval Security Group Activity Sugar Grove, West Virginia

Sustainable Design Workshop Report; Housing Report NSGA Sugar Grove, West Virginia; Booker Associates, Inc. Jan 1996